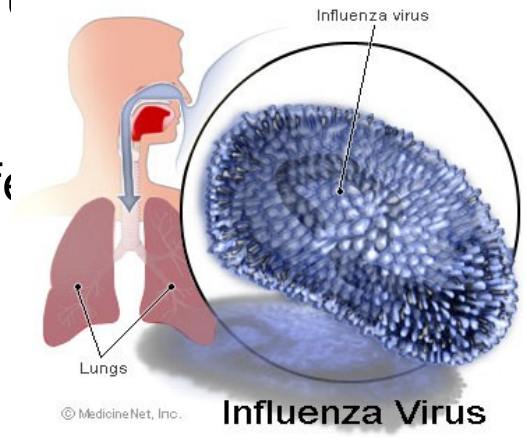
Influenza *and* Influenza Vaccine

8 November 2005

MILVAX

Influenza Virus

- Influenza is a contagious respiratory disease caused by influenza type A or influenza type B viruses.
- Influenza viruses change over time, requiring a different influenza vaccine to be made each year.
- Scientists correctly predict the strains of influenza for the next season 9 times out of 10.
- Influenza virus is spread by airborne respiratory droplets.
- Influenza severity can range from mild to life threatening, depending on age, immune status, and other factors.



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Influenza Virus

- Rates of infection are highest among children.
- Rates of serious illness and death are highest among:
  - ✓ persons over 65 years
  - ✓ children under 2 years
  - ✓ persons of any age who have medical conditions that place them at risk for complications from influenza.
- Since 1977, influenza A and influenza B viruses have been in global circulation. In 2001, influenza A began circulating widely.

Influenza Infection

- Influenza has an incubation period of 1 to 4 days with an average of 2 days.
- Symptoms include: fever, muscle aches, headache, malaise, nonproductive cough, sore throat, and runny nose.
- Influenza infection can lead to more serious conditions such as pneumonia.
- Influenza infection can cause high fever ar seizures in children.
- Influenza kills about 36,000 people per yea in the United States consisting mostly of th elderly.

Influenza Infection

- Adults can be infectious from the day before symptoms begin through approximately 5 days after onset of illness.
- Children can be infectious for more than 10 days. Young children can shed virus for several days before their illness onset.
- Severely immunocompromised persons can shed virus for weeks or months.
- Influenza illness typically resolves after 3 to 7 days for the majority of persons, although cough and malaise can persist for over 2 weeks.

Influenza Vaccine

- Influenza vaccination is the primary method for preventing influenza and its severe complications.

- Two forms of influenza vaccine are distributed in the U.S.

  - ✓ Injectable influenza vaccines (FluZone and Fluvirin) contain inactivated viruses that have been broken into pieces and purified.

  - ✓ Nasal influenza vaccine (FluMist) contains live attenuated (weakened) influenza viruse At present, it is licensed for use in healthy people 5 to 49 years of age.

Influenza Vaccine

- The primary goal is Total Force immunization including active duty, activated Reserve Component personnel, and targeted high-risk Tricare beneficiaries.

- Our secondary goal is to prevent influenza in any other beneficiary including:

  - ✓ People 65 years and older who have high-risk medical conditions and nursing home residents
  - ✓ People 2 to 64 years old with high-risk medical conditions
  - ✓ Pregnant women and women who expect to become pregnant during the influenza season
  - ✓ People without high risk conditions who are older than 65 years
  - ✓ Children 6 to 23 months old
  - ✓ Healthcare workers and individuals who have close contact with children under 6 months of age and contacts of all other high risk people
  - ✓ Healthy people 50 to 64 years old

- Antibody against one influenza type or subtype provides limited or no protection against another type of subtype of influenza.

Influenza Historical Information

- Epidemics of influenza typically occur during the winter months in temperate regions.
- Influenza viruses can cause pandemics, during which rates of illness and death from influenza-related complications can increase worldwide.
- During influenza epidemics from 1979-80 through 2000-01, the estimated overall number of influenza-associated hospitalizations in the United States ranged from approximately 54,000 to 430,000 per epidemic.
- Since the 1968 influenza A pandemic, the greatest numbers of influenza-associated hospitalizations have occurred during epidemics caused by type A viruses.
- Deaths of older adults account for over 90% of deaths attributed to influenza and pneumonia.

Influenza Historical Information

- Influenza seasons in which influenza A viruses predominate are associated with higher mortality.
- Influenza A viruses predominated in 90% of influenza seasons during 1990-1999, compared with 57% of seasons during 1976-1990.
- In the 1918 pandemic, there were 546,000 deat the United States, or over 25 times more deaths in a typical year.
  - ✓ This mortality figure includes 43,000 uniformed soldiers who were mobilized for World War I.

- During the 1918 pandemic, about 1 in 20 persons between 18 - 50 years old, the age of the vast majority of military personnel, died during a 10-week epidemic.

Avian (Bird) Influenza

- Avian influenza is likely to continue.
- Presently, there is no evidence that avian influenza is spread person-to-person.
- Any change in the avian influenza virus allowing efficient, sustained transmission among humans could lead to a high incidence of illness and death.
- There is no FDA-licensed vaccine to protect humans from avian influenza.

Whatever happened to plenty of rest, lots of fluids, and call me in the morning?!!
CITIZEN-TIMES
40 MILLION BIRDS DESTROYED; FLU RAMPANT

8 November

- Research on a vaccine to protect against the avian influenza virus began in April 2005.
- Mass production of an avian influenza vaccine will take years to produce.

Avian (Bird) Influenza

- An antiviral drug called oseltamivir (Tamiflu) kills influenza A virus in laboratory tests.
- DoD purchased 20 million capsules of Tamiflu in September 2005 as a strategic reserve to protect U.S. Forces living outside of the continental U.S. However, if Tamiflu is overused, viruses can develop resistance.
- The World Health Organization (WHO) currently classifies the pandemic phase as “pandemic alert period, phase 3.” WHO defines this phase as human infections with a new subtype, but no human-to-human spread, or at most rare instances of spread to a close contact.
- Researchers are also beginning to develop a vaccine against another bird influenza virus subtype.

How you can PREVENT *the* FLU

Vaccination is not the only way to combat the flu.
Use these simple tips to *prevent* the flu before it happens.

Avoid close contact.

Avoid close contact with people who are sick. When you are sick, keep your distance from others to protect them from getting sick too.

Clean your hands.

Washing your hands often will help protect you from germs.

Stay home when you are sick.

If possible, stay home from work, school, and errands when you are sick. You will help prevent others from catching your illness.

Cover your mouth and nose.

Cover your mouth and nose with a tissue when coughing or sneezing. It may prevent those around you from getting sick.

Avoid touching your eyes, nose, or mouth.

Germs are often spread when a person touches something that is contaminated with germ and then touches his or her eyes, nose, or mouth.

Source: Centers for Disease Control and Prevention

More Information

- Military Vaccine Agency (MILVAX)
  - Toll-free: 1-877-GETVACC
  - E-mail: vaccines@amedd.army.mil
  - Web: www.vaccines.mil/influenza